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EBRF 2008

Research Forum to Understand
Business in Knowledge Society
September 22-24, 2008
Helsinki-Stokholm, FINLAND-SWEDEN

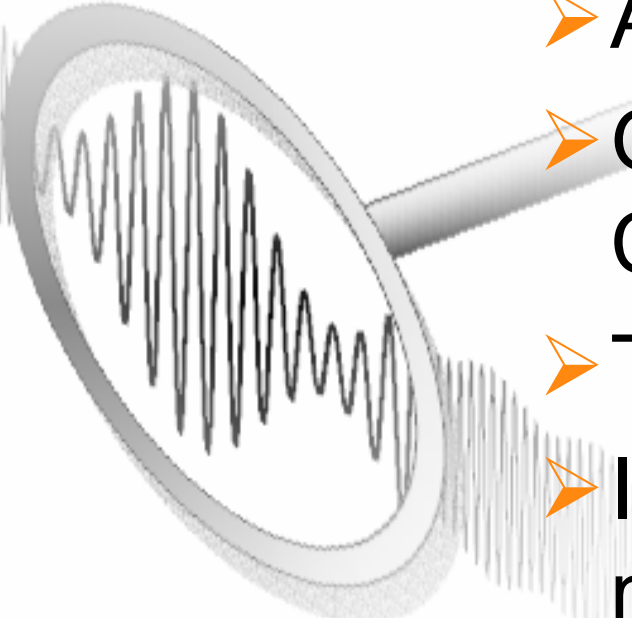
Academic Management Payment Using Collaborative Model

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Topics

- 
- Introduction
 - Academic management
 - Grid model for Collaborative University
 - Taxes Model
 - Implementation of model
 - Conclusions



Introduction

Each organisation and also universities may be looked from both points of view: static (organisational structure) and dynamic (dataflow).

Openflow is an activity based workflow management system.

Higher education might diversify structurally according to different dimensions :

horizontal diversification

- types of institutions and programmes,
- levels of degrees,
- substantive profiles of institutions and programmes of the same type

vertical diversification – ranks of reputation and quality of the institutions and programmes of the same type (Teichler, 1998).



Academic management

Strategic Plan for the period 2004-2007

Priorities:

1. Implementation of the Bologna Declaration and the restructuring plans for education;
2. Institutional connection with university extension programs and joint (*joint programs*) in the Euro-Atlantic University;
3. Expanded university involvement in development projects at regional and national level
4. University management



Academic management

Babeş-Bolyai University (BBU)

Features:

- Multicultural university
- Has *logic of (traditional) excellence* and *entrepreneurial logic*
- Offer a *collaborative* solution
- *Promote university laboratory* based on connection with companies and other organizations



Grid model for Collaborative University

Main issues

- *Virtual Organization (VO) virtualization*
- *technology*
- *transparent access*
- *services*
- *Infrastructure*

Technology solutions (SUN, Oracle, IBM, Microsoft)

Grid projects (EGEE, SEE-GRID, RoGRID)



Grid model for Collaborative University (2)

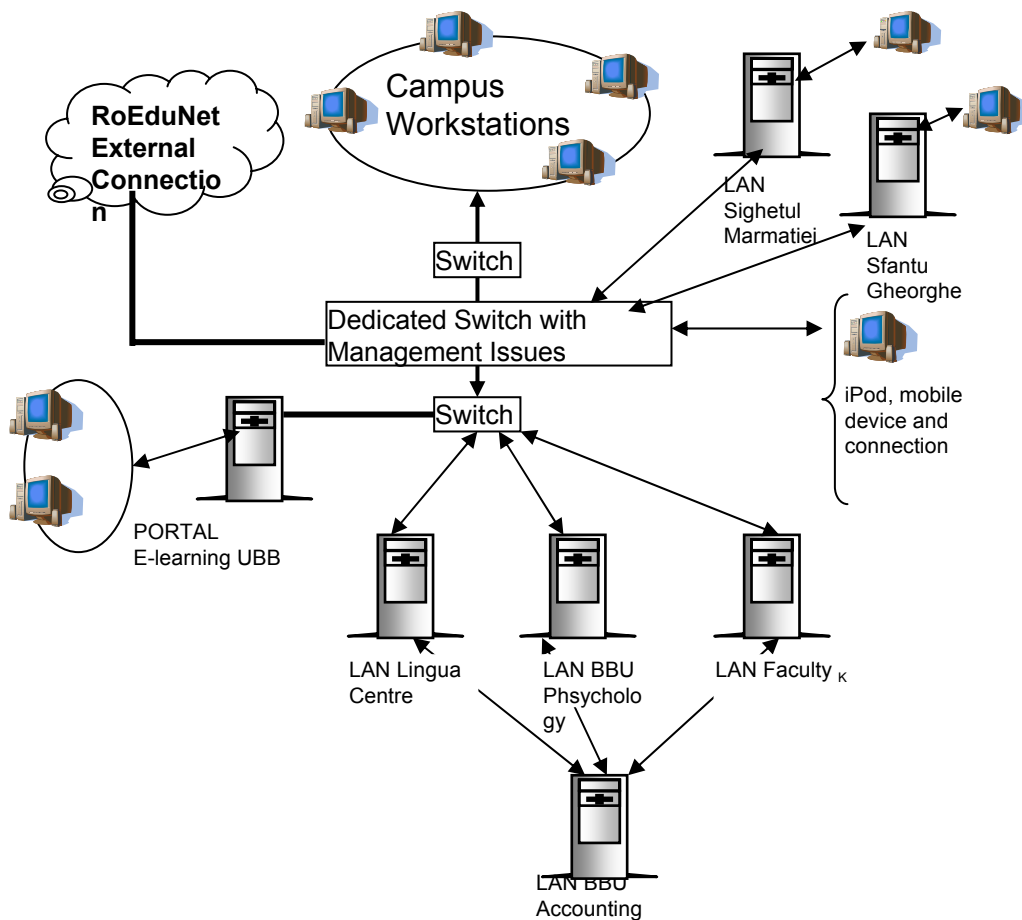
Grid EGEE

- *generic*
- *not centrally controlled*

Types of EGEE-Grid:

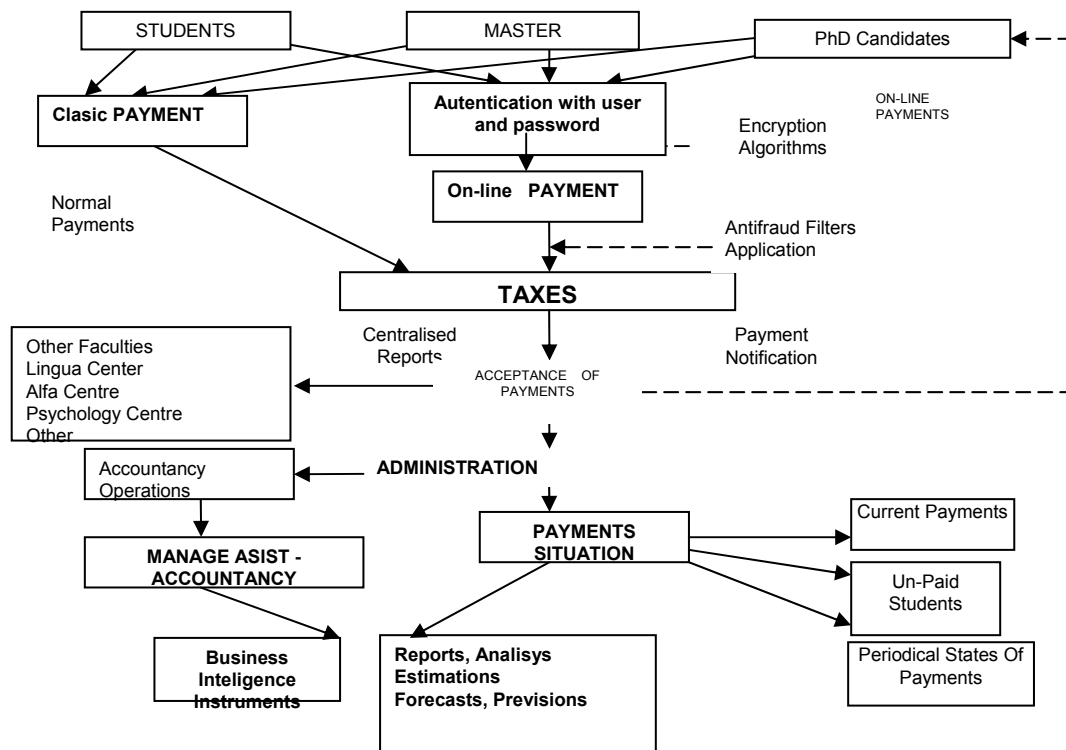
- *Data Grid*
- *Computing Grid*
- *Information Grid*

Grid model for BBU-VO



Taxes model

Figure 2. Taxes Payment Flow Scenario





Implementation of model

In conceptual scheme we used: classic method, by cash, and electronic payments.

Workflow of electronic payment system:

- **Authentication**
- **Select university, faculty, program**
- **Identifying taxes**
- **Payment and notify to payers, administration and to accountancy.**
- **Following the operation of data aggregation by departments, faculty, type of payment. Generates personalized reports from all the parts implicated in payment activity.**



Feature of implementation

UML model presents all the components of the flow like **Students**, **PhD Candidates**, **Taxes Module**, **Administration Module** and **Accountancy Module**.

- Between objects signals, stimulus, which represents the activities are transmitted and filtered:
- From Students are transmitted informations regarding payments initiation to Taxes Module, using **inputPaymentData()** function.
- From Taxes Module, where the payment is operated are transmitted informations to Administration Module with **getPaymentData()** function and to Accountancy Module for operation of effective payment through the same function.
- From Accountancy Module are transmitted different informations and notification to Administration Module, using **sendPaymentNotification()** function, from where are forwarded reports regarding Payments Situation either to Taxes Module and payers, using **sendPaymentReport()** function.



Conclusion

- ✓ From the results above we obtain a Grid model for our university based on EGEE features and RoEduNet Grid as a solution to external connection
- ✓ According to BBU strategy we assume the advantage of collaboration model for implementing Taxe module
- ✓ We consider workflow based on static and dynamic point of view and take account of vertical diversification.
- ✓ The gain consists in modern management solution, earning for students and university, security, real situations available in every department/faculty
- ✓ The ease of implementation makes the proposed technique attractive



Thank you
for your attention!

This research was supported by
PNII — Program, 91-049/18.09.2007, Higher Education Ministry